GWALIA (U.S.A.) LTD.



Barite Hill Project P.O. Box 1510 McCormick, SC 29835 Telephone: (803) 465-3313 Facsimile: (803) 465-3208

May 3, 1991

Enforcement Section
SC Department of Health and
Environmental Control
2600 Bull Street
Columbia, SC 29201

COlumbia, SC 29201

RE: BARITE HILL MONITOR WELL QUARTERLY SAMPLES

To Whom It May Concern;

Attached are the results of the quarterly samples taken from Barite Hill's monitor wells as required in Construction Permit #16225. These samples were taken on March 27, 1991 and delivered to Davis & Floyd Laboratories in Greenwood, SC on March 28.

RECEIVEL

WATER QUALITY ASSESSMENT. DIVISION AND ENFORCEMENT DIVISION

If you have any questions or need any further information please contact me.

Sincerely,

Dan Ruminski Mine Manager

DR/baw

Enclosure

cc. Cathy Montgomery, SCDHEC Craig Kennedy, LRCC

Davis & Floyd, Inc.

Laboratory Analysis Report

Work Order # 91-03-165

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REPORT GWALIA USA LIMITED TO P.O. BOX 1510

McCORMICK, S. C. 29835

ATTEN SCOTT WILKINSON

WORK ID JOB.# 7561.00
P.O. #
TAKEN GWALIA
TYPE GROUNDWATER
NUMBER OF SAMPLES 5

04/26/91 11:13:34

PREPARED Davis & Floyd, Inc. BY P.O. Drawer 428 Greenwood, S.C. 29648

PHONE (803)-229_5211

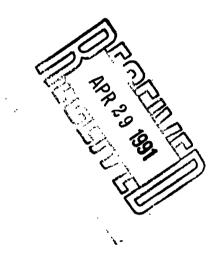
CERTIFIED BY

JOHN MCCORD

Comments:

WE ARE PLEASED TO PROVIDE THIS CERTIFIED REPORT OF ANALYSES.
FEEL FREE TO TELEPHONE IF FURTHER EXPLANATION IS REQUIRED.
UNLESS OTHER ARRANGEMENTS HAVE BEEN MADE, SAMPLES WILL BE
DISPOSED OF OR RETURNED 28 DAYS FROM THE DATE OF THIS REPORT.

	SAMPLE	IDENTIFICATION	DATE	COLLECTED
01	GW-1		03/27	7/91
02	GW-2		03/27	7/91
03	GW-3		03/27	7/91
04	GW-5		03/27	7/91
05	GW-6		03/27	7/91





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Work Order # 91-03-165

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est Description	Units	01 GW-1	02 GH-2	03 GW-3	04 GW-5					
ILVER (TOTAL)	mg/l (<0.01	<0.01	<0.01	<0.01					
LUMINUM (TOTAL)	mg/l	(18.4)	. 144	11.4	6.8					
ARIUM (TOTAL)	mg/l	0.28	1.80	0.08	<0.02					
ALCIUM (TOTAL)	mg/l∣	19.2	3.2	34.1	13.0					
ADMIUM (TOTAL)	mg/l∣	0.080	0.012	<0.002	<0.002					
HRONIUM (TOTAL)	mg/l∤	0.06	0.07	0.03	<0.01					
OPPER (TOTAL)	mg/l	0.53	0.80	0.03	0.02					
RON (TOTAL)	mg/l	48.4	290	16.1	8.64					
OTASSIUM (TOTAL)	mg/l	6	17	<2	<2					
AGNESIUM (TOTAL)	mg/l	17.6	86.7	25.2	15.9					
ANGANESE (TOTAL)	mg∕i mg∕i	0.70	3.57	1.01	0.61					
ODIUM (TOTAL)	mg/l	15	5	30	8					
ICKEL (TOTAL)	mg/l ¦	0.08	0.06	0.02	<0.02					
INC (TOTAL)	mg/l i	2.19	0.58	0.08	0.12					
ERCURY (TOTAL)	mg/l i	<0.0002	<0.0002	<0.0002	<0.0002					
RSENIC (TOTAL)	. mg/l¦	0.024	0.015	<0.005	<0.005					
EAD (TOTAL)	i mg∕i t	0.320	0.220	0.007	0.005					
ELENIUM (TOTAL)	mg/l	<0.005	<0.05 X	<0.05 X	<0.005					
OTAL ORGANIC CARBON	mg∕i (4	3	3	2					
ICARBONATE ALKALINITY	i mg/l i	7.35	28.35	168	65.1					
HLORIDE	mg/l	4	3	43	4					
H (LAB)	 pHunits 	5.2	6.0	6.9	6.7					
ULFATE	mg∕l i	100	<300	8	22					
PECIFIC CONDUCTANCE	micromhos/cm	285	100	400	180					
EMPERATURE	 Degrees C	22	22	22	23					

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Work Order # 91-03-165 Continued From Above

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	1	01	02	03	04	Ī
Test Description	Units	GW-1	GW-2	GW-3	GW-5	- 1
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					^ 70	
AMMONIA NITROGEN	mg/l	0.2	0.43	0.60	0.38	ŀ
 NITRATE NITROGEN	mg/l	0.56	<0.2 X	<0.05	<0.05	
[i
CYANIDE (TOTAL)	mg/l i	<0.005	<0.005	<0.005	<0.005	i
ĺ	j					I
TOTAL DISSOLVED SOLIDS	mg/l	259	129	333	185	
1	1					

 Test Description 	Units	05 GW-6
 SILVER (TOTAL)	mg/l	
 ALUMINUM (TOTAL) 	mg/l	1.2
I BARIUM (TOTAL) 	mg/l	0.03
 CALCIUM (TOTAL) 	mg/l∫	 18.1
 CADMIUM (TOTAL) 	mg/l	
I CHROMIUM (TOTAL) 	mg/l	 <0.01
 COPPER (TOTAL) 	mg/l	<0.02
 IRON (TOTAL) 	mg/l	1.02
 POTASSIUM (TOTAL) 	mg/l	
 Magnesium (Total) 	mg/l [10.2
MANGANESE (TOTAL)	mg/l	0.22
SODIUM (TOTAL)	mg∕l [
 NICKEL (TOTAL) 	mg/l	<0.02
 ZINC (TOTAL) 	mg/l	<0.02
 MERCURY (TOTAL) 	mg/l	
(ARSENIC (TOTAL)	mg/l	(
 LEAD (TOTAL) 	mg/l	0.017
i		1

Davis & Floyd, Inc.

Laboratory Analysis Report

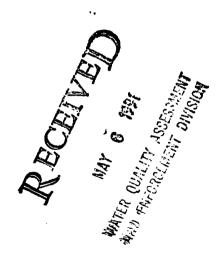
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		 _	-
 Test Description 	Units	05 GW-6 	
SELENIUM (TOTAL)	mg/l ∣	<0.005	
TOTAL ORGANIC CARBON	mg∕l	5	
 BICARBONATE ALKALINITY	mg/l	87.15	
(pH (LAB) 	pH units	7.0	
SULFATE	mg/l	12	
SPECIFIC CONDUCTANCE	micromhos/cm	290	
TEMPERATURE	Degrees C	23	
AMMONIA MITROGEN	mg/l	0.19	į
NITRATE NITROGEN	mg∕l	0.06	
CYANIDE (TOTAL)	mg/l ∫	<0.005	i 1
TOTAL DISSOLVED SOLIDS	mg/l	272	
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Davis & Floyd, Inc.

Laboratory Analysis Report

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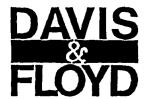
Work Order # 91-03-165

GWALIA USA LIMITED

DEFINITIONS AND EXPLANATIONS:

THE "X" INDICATES A MATRIX INTERFERENCE WHICH MAY REQUIRE A DILUTION OR WHICH PREVENTS THE REPORTING OF A RESULT. DETECTION LIMITS HAVE BEEN ADJUSTED WHERE APPLICABLE.





Chain of Custody Form

816 East Durst Street, Greenwood, S.C. 29646 Phone (803)229-5211

Fax (803)229-7844

PROJ. NO. PROJECT NAME 7561 Gwalia (U.S.A.) Ltd. SAMPLERS NAME/AFFILIATION:(PRINTED)						OF CONTAINERS		9. 7. 9. 7. 9. 7. 9. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	10°7		20 10		7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	X. And	RAME	TERS				SAMPLE TYPE	TTAL HAZARD	
SAMPLE NO.	DATE	TIME	сомъ.	GRAB	SAMPLE	DESCRIPTION	NO. 0	Kir	75			XX.			SC P					REMARKS	SAA	POTENTIAL
GW-1	3-27-91			K	ground	water	7	1	1	1	1		1	1						*Ha.K.MN.	Gu	
GW-Z	3-21-9			X	٠, ١,	Lj	7	1	1	1	7	1	1	1						Ca, Fe, Na,	Gw	
Gw-3	3-229	1435	⊥'	K	4	4,	17	1	1	1	1	1	4	/						Ma, Al, Ba,	Gw	اهٰ
Gw-5	,		⊥_′	8	Li	Ŋ	17	1/	1	1	1	1	1	1						cd, Cr, Cu,	Gu	131
GW-6	3-27-91	 	 	X	1 \	۲,	17	-	1	1	/	/		_/						Ag, Zu, As,	Si	批
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	RINKING ROUND Y				W-WASTE WATER C-RCRA	HW-HAZARDOUS WAS SW-SURFACE WATER		SD- IM-	SOLII IMPIN	GER	SOLU	JTION	A	B-AE	SORB	ENT	TUBE	: 		·		